

carbonate, comprising:

a housing having an inlet and an accept outlet;

a rotatable distribution member positioned within said housing;

5 a rotor and stator assembly positioned within said housing radially outside of said distribution member, including a rotor and stator in opposed relationship defining a gap therebetween, said gap being between approximately 0.5 mm and 100 mm;

a toothed ring interposed between said distribution member and said rotor and stator assembly, said toothed ring and said rotor and stator assembly defining a gas ring therebetween;

10 and

a reactant gas supply fluidly coupled with said gas ring.

9. (Amended) The fiber loading apparatus of claim 8, including a control valve coupled with said reactant gas supply for controlling at least one of a pressure and flow rate of a reactant
15 gas into said gas ring.

12. (Amended) An apparatus for loading fibers in a fiber suspension with calcium carbonate, comprising:

a housing having an inlet and an accept outlet;

20 a rotatable distribution cross within said housing, said distribution cross including a plurality of radially extending paddles, said distribution cross having an axis of rotation;

a rotor and stator assembly positioned within said housing radially outside of said distribution cross, including a rotor and stator in opposed relationship defining a gap therebetween, said gap being between approximately 0.5 mm and 100 mm;

25 a toothed ring interposed between said distribution rotor and said rotor and stator